# **CPC** COOPERATIVE PATENT CLASSIFICATION

# B67B APPLYING CLOSURE MEMBERS TO BOTTLES JARS, OR SIMILAR CONTAINERS

**OPENING CLOSED CONTAINERS** (opening or closing devices attached to, or incorporated in, containers or container closures <u>B65D</u>)

### **WARNING**

The following IPC groups are not used in the CPC scheme. Subject-matter covered by these groups is classified in the following CPC groups:

B67B 7/46 covered by B67B 7/30 to B67B 7/385

<u>B67B 7/48</u> to <u>B67B 7/52</u> covered by <u>B67B 7/24</u>, <u>B67B 7/26</u>, <u>B67B 7/28</u>

B67B 7/54 to B67B 7/90 covered by B67B 7/30 to B67B 7/385

## **Guide heading:**

B67B 1/00	Closing bottles, jars or similar containers by applying stoppers (stoppers per se $\underline{\sf B65D\ 39/00})$
B67B 1/005	. {Feeding stoppers (in general <u>B65G</u> )}
B67B 1/03	<ul> <li>Pretreatment of stoppers, e.g. cleaning, steaming, heating, impregnating or coating Applying resilient rings to stoppers (mechanical working of cork <u>B27J 5/00</u>)</li> </ul>
B67B 1/04	by inserting threadless stoppers, e.g. cork
B67B 1/045	{using hand operated devices }
B67B 1/06	. by inserting and rotating screw stoppers
B67B 1/08	. Securing stoppers, e.g. swing stoppers, which are held in position by associated pressure-applying means coacting with the bottle neck
B67B 1/10	. by inserting disc closures
B67B 3/00	Closing bottles, jars or similar containers by applying caps (caps per se $\underline{B65D}$ $\underline{41/00}$ )
B67B 3/003	• { Pretreatment of caps, e.g. cleaning, steaming, heating or sterilizing }
B67B 3/006	. {Applying date marks, code marks, or the like, to caps during capping (applying marks to labels $\underline{\sf B65C~9/46})$ }
B67B 3/02	. by applying flanged caps, e.g. crown caps, and securing by deformation of flanges
B67B 3/023	{using additional means for securing the cap, e.g. adhesives }
B67B 3/026	{the caps being made of thermoplastic material ( <u>B67B 3/023</u> takes precedence) }
B67B 3/04	Cutting caps from strip material in capping machines (devices for registering

# moving strip material <u>B65H 23/00</u>) ... Feeding caps to capping heads ... {the caps having an asymmetric

B67B 3/06

867B 3/061 ... {the caps having an asymmetric footprint, e.g. comprising a gripping lip }

B67B 3/062 ... from a magazine { (<u>B67B 3/061</u> takes precedence) }

B67B 3/064 ... from a hopper { (<u>B67B 3/061</u> takes precedence) }

B67B 3/0645 .... {with means for orientating the caps to a position ready to be applied to the container }

B67B 3/10 ... Capping heads for securing caps { (B67B 3/023 takes precedence) }

characterised by being movable axially relative to cap to deform flanges thereof, e.g. to press projecting flange rims inwardly

characterised by having movable elements, e.g. hinged fingers, for applying radial pressure to the flange of the cap (B67B 3/16, B67B 3/18 take precedence)

B67B 3/16 ... characterised by having resilient deforming elements, e.g. resilient sleeves or collars (B67B 3/18 takes precedence)

B67B 3/18 ... characterised by being rotatable, e.g. for forming screw threads in situ

by applying and rotating preformed threaded caps (forming threads in situ by resilient deforming means <u>B67B 3/16</u>, by rotary capping heads <u>B67B 3/18</u>)

B67B 3/2006 ... { using manually-controlled or manually operated devices }

B67B 3/2013 .. { by carousel-type capping machines }

867B 3/202 ... { using friction means for screwing the caps, e.g. belts or guides (<u>B67B 3/2026</u>, <u>B67B 3/2033</u> take precedence) }

B67B 3/2026 ... { comprising stationary capping heads }

B67B 3/2033 ... { comprising carousel co-rotating capping heads }

B67B 3/204 ... { Linear-type capping machines }

B67B 3/2046 ... { using friction means for screwing the caps, e.g. belts or wheels (<u>B67B 3/2053</u> takes precedence) }

B67B 3/2053 ... { comprising capping heads }

B67B 3/206 ... { Means for preventing rotation of the container or cap }

B67B 3/2066 ... { Details of capping heads (B67B 3/2073 takes precedence) }

B67B 3/2073 ... { comprising torque limiting means (torque limiters in wrenches or screwdrivers B25B 23/14; couplings or clutches per se F16D) }

Electrical means responsive to the torque applied and acting on motor control means, e.g. strain gauges or power measurement means (B67B 3/2093 takes precedence) }

B67B 3/2086 ... { Magnetic or electromagnetic clutches }

B67B 3/2093 ... { whereby the applied torque limit is varied }

B67B 3/22 . by applying snap-on caps

B67B 3/24 . Special measures for applying and securing caps under vacuum

B67B 3/26 . Applications of control, warning, or safety devices in capping machinery

B67B 3/261 .. {Devices for controlling the tightening of threaded caps, e.g. testing the release torque (torque testers in general G01L 5/00) }

B67B 3/262 ... {Devices for controlling the caps }

B67B 3/264	{positioning of the caps }
B67B 3/265	{presence of a cap }
B67B 3/267	{positioning of the cap-label }
B67B 3/268	{devices for avoiding damage to the closing machine }
B67B 3/28	. Mechanisms for causing relative movement between bottle or jar and capping head
B67B 5/00	Applying protective or decorative covers to closures  Devices for securing bottle closures with wire (infant feeding teats with means for fastening to bottles A61J 11/04)
B67B 5/03	. Applying protective or decorative covers to closures, e.g. by forming in situ
B67B 5/032	{Dies for securing overcaps }
B67B 5/034	{the covers being elastic }
B67B 5/036	{the covers being heat-shrinkable }
B67B 5/038	{the covers being applied wet, whereby shrinkage occurs on drying }
B67B 5/05	by applying liquids, e.g. by dipping
B67B 5/06	. Devices for securing bottle closures with wire ( <u>B67B 1/08</u> takes precedence)
B67B 6/00	Closing bottles, jars or similar containers by applying closure members, not provided for in groups <u>B67B 1/00</u> - <u>B67B 5/00</u>
B67B 7/00	Hand- or power-operated devices for opening closed containers (nail pullers or extractors <u>B25C 11/00</u> ; { for expelling solid content, e.g. pills, from blister packs <u>B65B 67/00D1</u> ; } attached to, or incorporated in, containers or container closures <u>B65D</u> ; { dispensers for pills from blister packs <u>B65B 69/0058</u> })
<b>B67B 7/00</b> B67B 7/02	extractors <u>B25C 11/00</u> ; { for expelling solid content, e.g. pills, from blister packs <u>B65B 67/00D1</u> ; } attached to, or incorporated in, containers or container closures <u>B65D</u> ; {
	extractors <u>B25C 11/00</u> ; { for expelling solid content, e.g. pills, from blister packs <u>B65B 67/00D1</u> ; } attached to, or incorporated in, containers or container closures <u>B65D</u> ; { dispensers for pills from blister packs <u>B65B 69/0058</u> })
B67B 7/02	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  for removing stoppers
B67B 7/02 B67B 7/04	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws
B67B 7/02 B67B 7/04 B67B 7/0405	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action } {of wine-waiter, i.e. sommelier type }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423 B67B 7/0429	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action } {of wine-waiter, i.e. sommelier type } {having means for varying the effective lever arm length }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423 B67B 7/0429 B67B 7/0435	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action } {of wine-waiter, i.e. sommelier type } {having means for varying the effective lever arm length } {with a pantograph extracting mechanism } {whereby the supporting means abut around the whole periphery of the neck
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423 B67B 7/0429 B67B 7/0435 B67B 7/0441	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers . Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action } {of wine-waiter, i.e. sommelier type } {having means for varying the effective lever arm length } {with a pantograph extracting mechanism } {whereby the supporting means abut around the whole periphery of the neck of the bottle } {whereby the supporting means abut around parts of the periphery of the
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423 B67B 7/0429 B67B 7/0435 B67B 7/0441 B67B 7/0447	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers Cork-screws {Power-operated cork-screws, e.g. operated by an electric motor } {without supporting means for assisting the pulling action } {with supporting means for assisting the pulling action } {of wine-waiter, i.e. sommelier type } {having means for varying the effective lever arm length } {with a pantograph extracting mechanism } {whereby the supporting means abut around the whole periphery of the neck of the bottle } {whereby the supporting means abut around parts of the periphery of the neck of the bottle }
B67B 7/02 B67B 7/04 B67B 7/0405 B67B 7/0411 B67B 7/0417 B67B 7/0423 B67B 7/0429 B67B 7/0435 B67B 7/0441 B67B 7/0447	extractors B25C 11/00; { for expelling solid content, e.g. pills, from blister packs B65B 67/00D1; } attached to, or incorporated in, containers or container closures B65D; { dispensers for pills from blister packs B65B 69/0058 })  . for removing stoppers  . Cork-screws  . {Power-operated cork-screws, e.g. operated by an electric motor }  . {without supporting means for assisting the pulling action }  . {of wine-waiter, i.e. sommelier type }  . {having means for varying the effective lever arm length }  . {with a pantograph extracting mechanism }  . {whereby the supporting means abut around the whole periphery of the neck of the bottle }  . {whereby the supporting means abut around parts of the periphery of the neck of the bottle }  . {adapted to be mounted on walls }

B67B 7/08	using air or gas pressure
B67B 7/10	with means for retrieving stoppers from the interior of the container
B67B 7/12	. for removing disc-closures
B67B 7/14	<ul> <li>for removing tightly-fitting lids or covers, e.g. of shoe-polish tins, by gripping and rotating</li> </ul>
B67B 7/15	finger grapple type
B67B 7/16	for removing flanged caps, e.g. crown caps
B67B 7/162	{the removing device being formed by at least two articulated parts, e.g. pliers (B67B 7/164 takes precedence) }
B67B 7/164	{Power-operated devices }
B67B 7/18	for removing threaded caps ( <u>B67B 7/14</u> takes precedence; wrenches <u>B25B 13/00</u> )
B67B 7/182	{power-operated }
B67B 7/184	{by use of a flexible loop gripping the cap skirt or the container body by friction }
B67B 7/186	{the loop having an adjustable length }
B67B 7/20	<ul> <li>for breaking vacuum seals between lids or covers and bodies of preserving jars, e.g. by wedge action</li> </ul>
B67B 7/22	incorporating loops, e.g. of wire, which are tightened around seal
B67B 7/24	. Hole-piercing devices
B67B 7/26	combined with spouts
B67B 7/28	and associated with receptacle hodlers
B67B 7/30	. Hand-operated cutting devices
B67B 7/32	propelled by rotary gears or wheels around periphery of container
B67B 7/34	with rotatable cutters
B67B 7/36	adapted to be mounted on walls
B67B 7/38	<ul> <li>Power-operated cutting devices (machines for domestic use with a plurality of interchangeable units <u>A47J 43/06</u>, <u>A47J 44/00</u>)</li> </ul>
B67B 7/385	<pre>{specially adapted to be hand-held }</pre>
B67B 7/40	<ul> <li>Devices for engaging tags, strips, or tongues for opening by tearing, e.g. slotted keys for opening sardine tins</li> </ul>
B67B 7/403	{adapted for engaging the ring of a pull tab for opening an aperture }
B67B 7/406	<pre>{and subsequently tearing off the top of the can }</pre>
B67B 7/42	. Devices for removing barrel bungs
B67B 7/44	<ul> <li>Combination tools, e.g. comprising cork-screws, can piercers, crowncap removers (combinations of opening devices with cutting tools <u>B26</u>; with devices serving other purposes, see appropriate subclasses, e.g. <u>B25F</u>; <u>B43K 29/00</u>)</li> </ul>
B67B 7/92	. by breaking, e.g. for ampoules

# **Guide heading:**

B67B 2007/00 Hand- or power-operated devices for opening closed containers (nail pullers or

extractors <u>B25C 11/00</u>; { for expelling solid content, e.g. pills, from blister packs <u>B65B 67/00D1</u>; } attached to, or incorporated in, containers or container closures <u>B65D</u>; {

dispensers for pills from blister packs B65B 69/0058 })

B67B 2007/02 . for removing stoppers

B67B 2007/04 .. Cork-screws

B67B 2007/0458 ... Means for cutting sealing capsules

B67B 2007/0464 ... Means for counting

B67B 2007/047 ... Means for reducing friction
B67B 2007/0476 .... by coating the screw
B67B 2007/0482 .... by using roller-bearings

B67B 2007/0488 ... Means for measuring temperature
B67B 2007/0494 ... Means for varying the lever arm

B67B 2007/16 . for removing flanged caps, e.g. crown caps
B67B 2007/166 .. Means for attaching the opener to fingers

B67B 2007/168 .. Means for counting

B67B 2007/18 . for removing threaded caps (B67B 7/14 takes precedence; wrenches B25B 13/00)

B67B 2007/188 .. Means for attaching the opener to fingers

B67B 2007/30 . Hand-operated cutting devices

B67B 2007/303 .. can openers

B67B 2007/306 ... Means for counting

#### **Guide heading:**

### B67B 2201/00 Indexing codes relating to constructional features of closing machines

B67B 2201/01 . Orienting closure means

B67B 2201/012 .. Stoppers

B67B 2201/015 ... Cylindrical stoppers

B67B 2201/017 .. Caps

B67B 2201/03 . applying two closures on a container

B67B 2201/06 . Details of cap feeding devices

B67B 2201/065 .. Use of magnets

B67B 2201/08 . Aseptic features

B67B 2201/10 . Quick or easy connection means for connecting a capping head to a spindle

B67B 2201/12 . Details related to spray caps, i.e. caps comprising a pump and a tube for dispensing

content from a container